WIDDRINGTONIA
– DEN AFRIKANSKE CYPRES

af

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***Widdringtonia* – the African Cypress**

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SUMMARY

The genus *Widdringtonia* (Cuppressaceae) consists of four species occurring in southern Africa (Pauw & Linder 1997, se also Gaussen 1968 and Farjon 1998): the widespread *W. nodiflora* (see Figs. 1-3) which is rather well-adapted to grow in fire-proned habitats (see Table 1), *W. cedarbergensis* endemic to Cederberg Mts. (see Figs. 4, 5), *W. schwarzii* endemic to Kouga and Baviaanskloof Mts. (see Figs. 5, 6) and *W. whytei* endemic to Mt. Mulanje (see Figs. 5, 7, 8) all of which are less well-adapted to wildfires than *W. nodiflora*. *Widdringtonia* is closely related to the Australian genera *Callitris* and *Actinostrobus*, and probably less so to the North African *Tetraclinis* (Chapman 1961, Marsh 1966b, Wikipedia 2005b, see also Gaussen 1968).

The generic name *Widdringtonia* Endlicher (1842) honours the writer Samuel Edward Cook (Chapman 1961, Marsh 1966b, Notten 2003) who in 1840 took the name Widdrington, his mother being heiress of some of the Widdrington estates. Cook served in Her Majesty's Royal Navy of Newton and Hauxley, Northumberland. On September the 16th 1813, three of the English slup "Swallow's" boats, under the command of Lieutenant (later Captain) Cook, overtook close under D'Anzo (Anzio, Italy) the French brig "Guerrier" (James 1837: 181). Later Widdrington lived for some years in Spain, writing "Sketches in Spain during the years 1829-1832" (Cook 1834) and "Spain and the Spaniards, in 1843" (Cook 1844). He died at his residence, Newton Hall, Northumberland, in January 1856 (Wikipedia 2005a).

For each species comments are given on nomenclature, distribution, ecology, conservation status, and uses. Furthermore, based on the informations in Table 1 the relationships among the *Widdringtonia* species are elucidated. The method for reconstructing the phylogeny is the neighbour-joining method of Saitou & Nei (1987), i.e., the NJOIN module of the NTSYSpc program (Rohlf 2005). The coefficient of dissimilarity employed in the reconstruction is the Euclidean distance coefficient of $(1\text{-SM})^{0.5}$ where SM is the so-called simple matching coefficient, which is commonly used in taxonomic studies (Rohlf 2005). Contrary to the assumptions of, e.g., Marsh (1966a) and Silba (1990), the NJOIN tree (Fig. 9) shows that *Widdringtonia whytei* appears to be closer related to the other two point endemic *Widdringtonia* species, *Widdringtonia cedarbergensis* and *Widdringtonia schwarzii,* than to *Widdringtonia nodiflora.*

Finally, together with new multiple-entry keys for *Widdringtonia* in the MEKA and SLIKS software (see Figs. 10 - 14) (Christensen 2005a,b), the following dichotomous key is presented.

Key to the genus *Widdringtonia*

1. Cone-scales convex, ± smooth or ± tuberculate. Scale-leaves of twigs of ultimate order ± triangular or ± semi-circular in cross-section **2.**

- Cone-scales concave, strongly tuberculate. Scale-leaves of twigs of ultimate order ± semi-circular in cross-section **3.**

2. Polycormic, rarely monocormic, bark fibrous. Scale-leaves with ± appressed apices, those of twigs of ultimate order ± triangular in cross-section. One pair of cone-scales distinctly longer than the other pair, cone-scales ± smooth ***W. nodiflora***

- Monocormic, bark spongy. Scale-leaves with free apices, those of twigs of ultimate order ± semi-circular in cross-section. The two pairs of cone-scales ± equal in length, cone-scales ± tuberculate ***W. whytei***

3. Scale-leaves acute. Seeds 3-angled, with a very narrow wing ***W. cedarbergensis***

- Scale-leaves obtuse. Seeds ± flattened, with a broad, well-developed wing ***W. schwarzii***